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# Yohkoh Bragg Crystal Spectrometer Light Curves for Ca XIX — 1 October 1991 - 30 September 1992

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This Memo Report summarizes the <u>Yohkoh</u> spacecraft. Each page nominally observes the Sun in the v further analysis and for determining	shows the total count rate in the vavelength range from 3.1631 to	Ca XIX channel of the BCS for 3.1912 Å. These plots are used			
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## YOHKOH BRAGG CRYSTAL SPECTROMETER LIGHT CURVES FOR Ca XIX (3.1631-3.1912Å): 1 OCTOBER 1991 - 30 SEPTEMBER 1992

#### 1. Introduction

The Bragg Crystal Spectrometer (BCS) on the Yohkoh spacecraft obtains high spectral resolution soft X-ray spectra in four channels centered on the resonance lines of Fe XXVI, Fe XXV, Ca XIX, and S XV. Data from the spectrometers are reformatted into files containing one data set per spectrum obtained with the BCS. The data sets are stored in data files containing one orbit of observations. These files also contain a road map section that summarizes the data contained in each spectrum, including the total count rate observed in each spectrometer.

Data from the Yohkoh spacecraft are released on exabyte tapes, which contain one week of observations for all the experiments, other spacecraft data files, and a full copy of the current data processing and analysis software. Because file retrieval from an exabyte tape can be a slow process and many users will not be able to keep all the data files on faster media, the Yohkoh Team has developed an observing log, which contains sufficient information to plot light curves from all the channels of the BCS and decide which data sets merit retrieval from tape and further analysis. Using this observing log, however, requires access to a graphics terminal running the Interactive Data Language (IDL<sup>TM</sup>). Moreover, disk space requirements for the log files are substantial.

As an alternate means of access to the data produced by the BCS, we have developed compact summary plots of the total count rate from each of the spectrometers on the BCS. This report contains those summary plots for the Ca XIX channel for the first year of BCS operations. We plan on issuing an additional report for each year of BCS operations for the life of the BCS experiment. Using this report it will be possible to determine the weekly tape identification and the data file name for any flare observed with the BCS.

#### 2. Organization of the Plots

Each page contains a summary of one day of BCS observations. The 24 hour period is divided into four 6-hour segments, in the same manner as plots from the GOES soft X-ray monitors. Within each 6-hour segment we plot the total count rate in the Ca XIX spectrometer of the BCS. This channel nominally covers the range from 3.1631 to 3.1912 Å. Since the BCS observes the entire Sun, the exact wavelength range covered varies from flare to flare, depending on the position of the emitting plasma on the Sun. Within each panel vertical lines mark the boundaries between data files. At the top left of each bounded area is

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the file extension for the data set. The base name of the file consists of the letters "bda" followed by the last two digits of the year, a two digit representation of the month, and a two digit representation of the day. This string of 6 digits is listed at the top of each plot page. For example, examination of the page for 1991 November 9 shows that the data for the flare which took place at approximately 3:30 UT are stored in data file bda911109.0250. Also plotted across each panel are solid lines showing spacecraft night and South Atlantic anomaly passage. No BCS data are available at those times.

At some times, especially early in the mission, data may appear in the plots under the night and SAA lines. These data should be viewed with considerable suspicion. For a variety of reasons data are often also unavailable when the satellite is in daylight and out of SAA. In some cases additional data may be available in future releases of reformatted tapes.

Yohkoh data are released on weekly tapes. Except for the first and last weeks of the year, each Yohkoh week begins on Sunday and ends the following Saturday. Table 1 contains a list of Yohkoh week numbers for the time period covered by this report.

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Table 1
Yohkoh Week Numbers

Week	1991	1992		
01		1-Jan-92	-	4-Jan-92
02		5-Jan-92	_	11-Jan-92
03		12-Jan-92	-	18-Jan-92
04		19-Jan-92	-	25-Jan-92
05		26-Jan-92	_	1-Feb-92
06		2-Feb-92	-	8-Feb-92
07		9-Feb-92	_	15-Feb-92
08		16-Feb-92	_	22-Feb-92
09		23-Feb-92	-	29-Feb-92
10		1-Mar-92	***	7-Mar-92
11		8-Mar-92	_	14-Mar-92
12		15-Mar-92	-	21-Mar-92
13		22-Mar-92	-	28-Mar-92
14		29-Mar-92	_	4-Apr-92
15		5-Apr-92	-	11-Apr-92
16		12-Apr-92	**	18-Apr-92
17		19-Apr-92	_	25-Apr-92
18		26-Apr-92	-	2-May-92
19		3-May-92	-	9-May-92
20		10-May-92	-	16-May-92
21		17-May-92	_	23-May-92
22		24-May-92	-	30-May-92
23		31-May-92	-	6-Jun-92
24		7-Jun-92	-	13-Jun-92
25		14-Jun-92	-	20-Jun-92
26		21-Jun-92	-	27-Jun-92
27		28-Jun-92	_	4-Jul-92
28		5-Jul-92	-	11-Jul-92

Week	1991		1992			
28				12-Jul-92	- Aug	18-Jul-92
30				19-Jul-92	_	25-Jul-92
31				26-Jul-92	-	1-Aug-92
32				2-Aug-92	-	8-Aug-92
33				9-Aug-92	-	15-Aug-92
34				16-Aug-92	-	22-Aug-92
35				23-Aug-92		29-Aug-92
36				30-Aug-92	-	5-Sep-92
37				6-Sep-92	-	12-Sep-92
38				13-Sep-92	_	19-Sep-92
39				20-Sep-92	-	26-Sep-92
40	29-Sep-91	-	5-0ct-91	27-Sep-92	_	3-0ct-92
41	6-0ct-91		12-Oct-91			
42	13-Oct-91		19-Oct-91			
43	20-Oct-91	_	26-Oct-91			
44	27-0ct-91	-	2-Nov-91			
45	3-Nov-91	_	9-Nov-91			
46	10-Nov-91	_	16-Nov-91			
47	17-Nov-91	_	23-Nov-91			
48	24-Nov-91	_	3û-Nov-91			
49	1-Dec-91	-	7-Dec-91			
50	8-Dec-91	-	14-Dec-91			
51	15-Dec-91		21-Dec-91			
52	22-Dec-91	-	28-Dec-91			
53	29-Dec-91	_	31-Dec-91			



























































































































































































































































































































































































































































































































































































































































































































































